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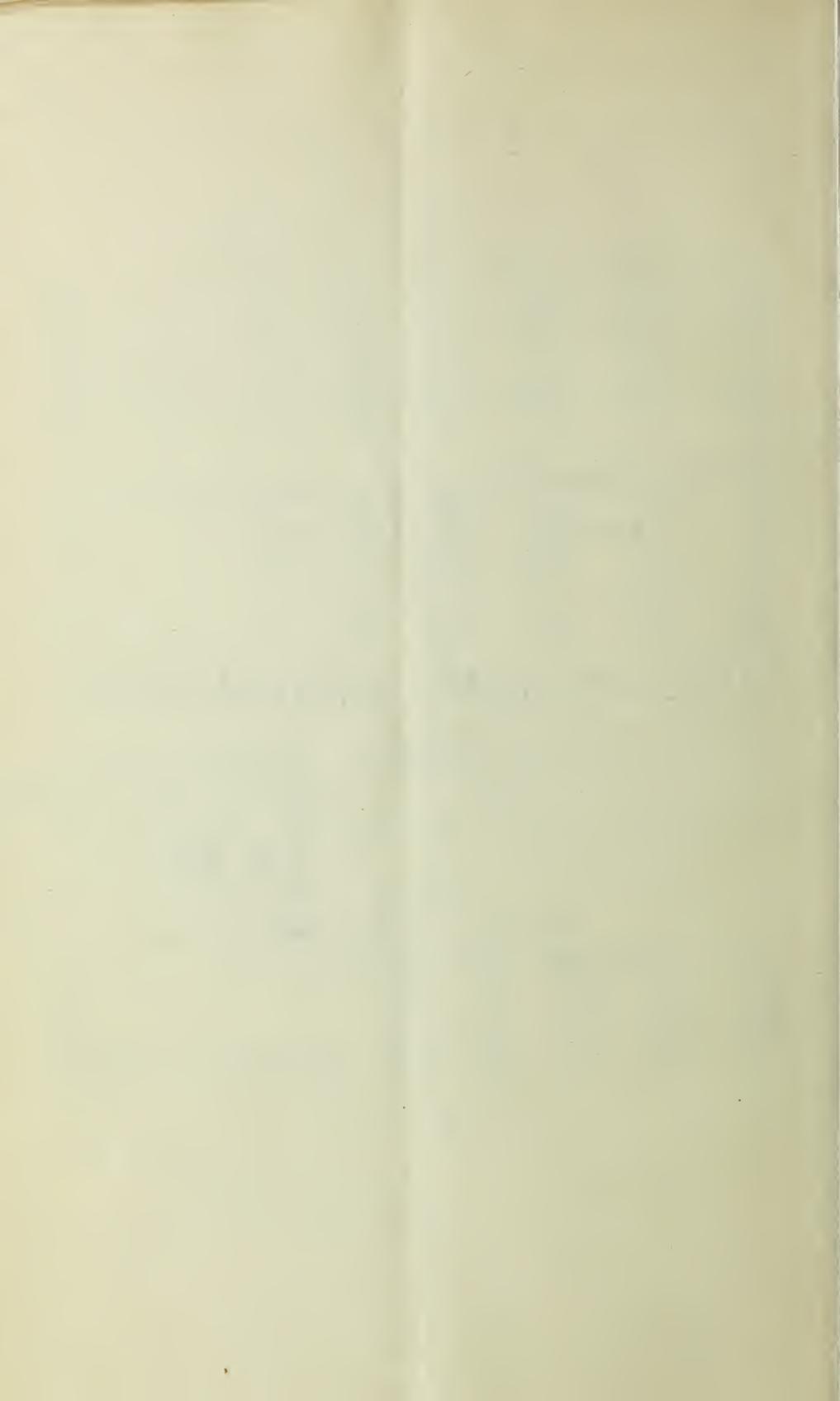
FOREIGN CROPS, MARCH-APRIL,
1913.

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FOREIGN CROPS, MARCH-APRIL, 1913.

From a world viewpoint interest in agriculture at this season of the year centers chiefly in the condition of the growing autumn-sown cereals and the seeding of spring crops. South of the Equator corn husking and the drilling of cereals for harvest in the winter of 1913-14 signalizes the approach of the dead season. In Argentina the corn crop, officially forecasted to be 197 million bushels, is the second largest in the history of the country, though almost 100 million bushels less than the record last year. In both Argentina and Australia the preparatory work of getting in seed for the next cereal harvest is being pursued, with weather and soil generally satisfactory.

In the northern hemisphere the quickened growth of autumn-sown vegetation and the active prosecution of spring field work are the principal agricultural features. The first harvest north of the Equator—that of wheat and oilseeds in British India—was in full swing under fairly favorable conditions in April. The prospect is for a larger yield than anticipated during last winter's protracted drought, but considerably smaller than the yield of 1911-12. For flaxseed the outlook, owing to decreased acreage and lack of sufficient moisture, is much less promising than a year ago.

Cereals in north Africa are nearing the ripening stage. Prospects in Algeria and Tunis are for abundant harvests, but in Morocco drought has impaired vegetation, especially of barley. In Egypt the appearance of both barley and wheat is officially returned as inferior to that at the same date last year.

In so far as known, the general agricultural situation in Europe presents a somewhat less hopeful outlook than in April, 1912. Weather and other conditions at seedtime last autumn were not entirely auspicious, and on the Continent, as a whole, several million acres intended for winter wheat were left unsown. Some contraction has been officially reported from the United Kingdom, France, Spain, and Germany, but the really important curtailment was in a group of countries comprising Hungary, Roumania, Servia, Bulgaria, European Turkey, and Russia. Official returns from Roumania and Hungary indicate shrinkage, compared with the previous year, of about $1\frac{1}{2}$ and $\frac{3}{4}$ millions acres, respectively; and private reports state that in the Balkan States a large proportion of the surface usually

sown to winter wheat remained unsown. In the last-named countries unseeded lands are likely to be largely laid down to spring-sown crops other than wheat, making the chances for good crops of that cereal very remote, whereas in Russia, where large areas are said to have been left unseeded in the fall, the loss may be made up by sowings of spring wheat—there a favorite object of cultivation.

On the areas sown last autumn the cereals in all European countries from which information has been received seem to have wintered in fair health. Excepting hard freezes over practically the whole Continent in February, with wide expanses bare of snow, hibernal temperatures, save in the colder regions of Russia, were with few exceptions unseasonably mild and precipitation copious. No extensive winter-kill, however, except it be in Russia, seems to have resulted from the rigorous weather; the sporadic complaints of thin stands and weak plants are due rather to excessive moisture, weediness, and the ravages of vermin.

Upon the opening of spring the general condition of autumn-sown fields in the United Kingdom, France, Germany, Austria, and Hungary was somewhat inferior to that at the corresponding time the year before, owing largely to the backward state of growth of late seedlings, the early sown being generally strongly rooted and vigorous. In Italy, on the other hand, the stand was good and the appearance of the plants fully normal; in Spain the situation was doubtful because of protracted drought during the winter in important agricultural regions. On the reduced acreage in Roumania appearances were promising; in Russia the condition was very satisfactory in the south, good in northern Caucasia and parts of Bessarabia, Kherson, Ekaterinoslav, Taurida, Podolia, Volhynia, and the Don Territory, but unsatisfactory in Poltava and Kieff; from other Russian governments there are no official reports.

Spring was pretty generally early in all the important agricultural regions of Europe. Warm sunshine and opportune rains almost everywhere throughout March and early April promoted healthy growth of vegetation and permitted most spring seeding to be done early on full areas with little interruption. In mid-April, however, rainy and cool weather set in in the United Kingdom, France, Germany, and Austria-Hungary, delaying in some districts completion of late sowings and causing some anxiety respecting the effects on the young plants. In parts of Hungary the cold snap was accompanied by heavy falls of snow.

ARGENTINA.

During the spring months, when in many countries of the northern hemisphere vast areas are being broken and seeded to spring-sown crops, Argentine farmers are in the midst of corn husking, of thrash-

ing the lately reaped wheat, and of preparing the seed bed in anticipation of the cereal harvest in the winter of 1913-14. For all these operations, transequatorial conditions the current season have in general been satisfactory. Since the protracted drought in January, which materially lessened the volume of the output of corn, especially in late-planted fields, repeated rains at opportune intervals have assured good yields over much of the corn belt. As given in a preliminary estimate by the Argentine Department of Agriculture, the production (196,640,000 bushels), though almost 100,000,000 bushels less than in the banner year, 1912, is the second largest in the history of the country. The damaging effects of the drought in the winter of 1913 are best reflected in the fact that the area planted to the current crop was almost a million acres larger than that of 1912.

Area (planted) and production of corn in Argentina, by Provinces, 1913-1911.

[Estimates of the Argentine Department of Agriculture.]

Province.	Area.			Production.		
	1913 a	1912	1911	1913 a	1912	1911
Buenos Aires.....	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Bushels.b</i>	<i>Bushels.b</i>	<i>Bushels.b</i>
Santa Fe.....	4,200,700	3,459,400	3,582,950	87,002,964	137,630,029	.....
Cordoba.....	2,915,780	2,718,100	2,467,294	64,956,964	86,491,182	.....
Entre Rios.....	1,235,500	1,161,370	985,435	21,061,804	31,494,286	.....
Pampa Central.....	222,390	207,564	126,021	2,558,911	5,983,914	.....
Other provinces and territories	148,260	222,390	208,800	1,574,714	3,543,107	.....
Total.....	9,463,930	8,455,762	7,945,130	196,642,446	295,849,446	27,675,000

a Preliminary.

b Bushels of 56 pounds.

c Data by Provinces not available.

Argentina, though having an acreage under corn not one-tenth that under this crop in the United States, is now, in years of normal yields, the world's heaviest exporter. Her preeminence in this trade is due to a great extent to the remarkable decrease in the shipments of this product from the United States. In the calendar year 1898 the exports of domestic corn from the United States reached a maximum for this trade of 207,309,381 bushels; in the same year those from Argentina amounted to only 28,230,887. Since that date the annual shipments from the United States have enormously, though irregularly, declined, while those from Argentina have increased with like irregularity in even greater proportions. In the calendar year 1912 the exports from the United States were smaller than in many years, and amounted to only 30,979,900 bushels, while those from Argentina, by virtue of the record crop of that year, reached the exceptional total of 190,352,319 bushels. The Argentine export trade

in corn for the last 8 years, together with acreage planted and the quantities produced, is shown in the following statement:

Area, production, exports, and price of corn in Argentina, 1906-1913.

Calendar year.	Area planted.	Production.	Exports.	Average annual price per bushel.
	<i>Acres.</i>	<i>Bushels.a</i>	<i>Bushels.a</i>	<i>Cents.b</i>
1906	6,714,448	194,910,261	106,046,732	49.5
1907	7,045,562	71,767,604	50,262,203	55.6
1908	6,719,291	136,055,314	67,390,055	62.0
1909	7,348,507	177,155,357	89,499,359	62.0
1910	7,425,355	175,186,964	104,727,358	55.4
1911	7,945,130	27,675,000	4,928,265	54.2
1912	8,455,762	295,849,446	190,352,919	(c)
1913 ^d	9,463,930	196,642,446	(c)	(c)

a Bushel of 56 pounds. b Gold. c No data. d Preliminary.

BRITISH INDIA.

Of the series of crop reports (entitled first, second, third, and final general memorandums) issued at regular intervals during the growing season by the Commercial Intelligence Department, India, there has lately been published for the year 1913 the "final" on rice, cotton, and peanuts, and the "second" on wheat, flaxseed, and rape and mustard. Final memorandums relate to both area and production, second memorandums only to area. A summary of the figures published up to date, compared with revised ones for the previous year, is given below, the production of rice (cleaned) being given in pounds, cotton in 400-pound bales, and peanuts in tons of 2,000 pounds.

Area and production of specified crops in British India, 1912-13 and 1911-12.

Crop.	1912-13	1911-12	1912-13	1911-12
	<i>Acres.</i>	<i>Acres.</i>	<i>Production.</i>	<i>Production.</i>
Rice (final memorandum).....	66,405,000	64,726,000	58,242,576,000	67,364,976,000
Cotton (final memorandum).....	21,911,000	21,615,000	4,397,000	3,288,000
Peanuts (final memorandum).....	1,343,000	1,214,000	705,376	678,496
Wheat (second memorandum).....	29,946,000	29,187,000	(b)	(b)
Flaxseed ^a (second memorandum).....	3,674,000	4,250,000	(b)	(b)
Rape and mustard (second memorandum).....	3,717,800	3,563,800	(b)	(b)

a Not including "mixed."

b Not yet estimated.

The estimates of the area and production of rice, it is officially stated, relate to only 86 per cent, those of wheat to 97.7 per cent, those of flaxseed to 98 per cent, and those of rape and mustard to 99.5 per cent of the respective areas ordinarily sown to each of these crops in British India. The figures relating to peanuts cover only the three principal producing Provinces, and those relating to cotton do not embrace the area and production (usually about 1,000 bales) in native States, in Bihar, and in Orissa.

As compared with the previous year, a noteworthy increase is apparent in the area but a decrease in the production of rice. The surface under cotton and wheat also shows an augmentation of 296,000 and 749,000 acres, respectively, but that of flaxseed a contraction of 576,000 acres. Although the production of wheat and flaxseed has not yet been calculated, drought in the early winter, broken by general rains only in late February, is believed to have impaired the prospect on unirrigated land to an extent only partially reparable by the subsequent abundant precipitation. Harvest, in full swing in April, was generally under fair conditions, and losses, it is thought, will be by no means so heavy as was at one time feared.

UNITED KINGDOM.

The downward trend of British wheat culture, which had long attracted world-wide comment, largely because of the utter insufficiency of the native crop for domestic needs, seems in late years to have been checked; half a million acres have been restored to the industry within the present century. In view of the great expansion of wheat growing in almost all agricultural countries, the decline in the British Isles was a unique feature of world agriculture. This economic anomaly is usually ascribed to the falling prices, which reached low ebb in the last decade of the last century. British farmers, finding the profits of the industry vanishing, gradually retired large areas from the cultivation of this cereal, and devoted them chiefly to what was deemed more remunerative use as meadows and grazing lands. Moreover, since the kinds of wheat most successfully cultivated at home were notoriously inferior in bread-making strength to much of the enormous quantity purchased abroad, it became recognized as the more profitable policy to grow varieties noted not so much for excellence of quality as for heavy yields per acre. The result was that British-grown wheat tended to decline in quality as the area diminished. From 1856 to 1904, the years, in so far as statistical records show, of maximum and minimum acreage, the extent of land under wheat was contracted from 4,213,651 to 1,406,013 acres, abandonment being most rapid in the last 30 years of the period.

Area and production of wheat in the United Kingdom in each decennial year from 1852 to 1912, and in 1856 and 1904, years of maximum and minimum wheat acreage.

Year.	Acres.	Bushels. ^a	Year.	Acres.	Bushels. ^a
1852.....	4,058,731	97,339,425	1892.....	2,295,246	62,467,773
1856.....	4,213,651	119,527,213	1902.....	1,770,600	60,115,085
1862.....	3,823,947	117,347,647	1904.....	1,406,013	39,114,826
1872.....	3,827,146	96,226,610	1912.....	1,970,542	66,340,295
1882.....	3,156,680	84,693,595			

^a Winchester bushels.

The rapidly declining acreage, intensifying, as it did, the well-known dependence of the Kingdom upon foreign nations for from three-fifths to four-fifths of its bread supply, engendered national solicitude. In 1904 a royal commission was appointed to inquire into the probability of obtaining adequate supplies in the event of war with a foreign Power. By virtue of the fact that wheat was imported in large quantities from widely separated sources—from Russia, British India, Australia, Argentina, the United States, and Canada—the commission reported no serious interruption of the inflow likely to result from an outbreak of hostilities. Partly because of the interest awakened by this inquiry, partly because of a subsequent improvement of prices, the wheat area has since been on the increase, and the experimental introduction and acclimatization of foreign varieties with a view of improving the general quality of the national crop has been carried on on an important scale.

The wheat acreage in 1912 was 1,970,500 acres, of which 1,837,300 acres were in England and Wales. The current season, according to the April 1 report of the Board of Agriculture and Fisheries, the total in these two divisions of the Kingdom is expected to be some 3 or 4 per cent below that of last year. The crop was generally healthy except on heavy soils, where prospects were poor. Wet weather had made spring sowings very backward—in many districts none had been planted. Potato planting, except in a few districts, had made very little progress.

FRANCE.

A tone of general satisfaction characterized reports concerning the progress of agriculture during March and early April; even local complaints of thin stands and damaged fields are perhaps no more rife than they usually are at this season. Winter cereals, the appearance of which, owing to the unusually wet and open winter, had caused disquietude, recovered rapidly upon the advent of an early and for the most part genial spring. This is indicated by the official returns on the monthly condition of winter wheat, which, on the basis of 100 representing "excellent," was given January 1 as 71, February 1 as 69.1, March 1 as 70.5, and April 1 as 73.

Seeding of the greater part of the spring-sown cereals—wheat, barley, and oats—began exceptionally early and was mostly effected by April 1 under soil and weather conditions almost ideal. Subsequent spells of unseasonably low temperature and heavy rainfalls, accompanied at times by hail, snow, and sleet, retarded, notably in the north, the completion of sowings. The latest reports express less satisfaction over the general outlook.

The total wheat crop of France during each of the last three years has been much short of domestic requirements, and imports have been

on an important scale. During the same period a steady and heavy increase is notable in the demand for foreign corn, the imports of which now exceed the native production.

Imports (special) of wheat^a and corn into France, by countries of origin, calendar years 1907-1912.

WHEAT.

Country of origin.	1907	1908	1909	1910	1911	1912
	<i>Bushels.b</i>	<i>Bushels.b</i>	<i>Bushels.b</i>	<i>Bushels.b</i>	<i>Bushels.b</i>	<i>Bushels.b</i>
United Kingdom.....	11,192	8,440	6,367	785,969	1,107,962	545,999
Belgium.....	1,973	1,922	1,804	624,372	998,566	292,194
Russia.....	2,767,012	104,032	89,646	2,603,033	9,908,556	3,945,231
Germany.....	1,481	1,315	312	2,720,616	5,186,685	2,489,229
Roumania.....	1,073,074	18,280	386	6,249,582	15,976,714	2,086,220
Turkey.....	19,952	467	169	9,186	2,609	29,104
British India.....	27,991	8,932	886	1,117,153	3,900,070	1,891,003
Australia.....	69,302	6,011	125	1,225,956	14,492,857	4,643,935
United States.....	243,869	12,651	8,036	1,088,617	4,393,485	2,193,628
Argentina.....	231,608	46,256	566	140,701	13,060,991	1,862,902
Algeria.....	7,603,757	2,033,795	4,169,960	5,782,416	6,206,419	4,420,781
Tunis.....	591,840	86,773	657,118	349,767	2,041,695	761,090
Free Zone.....	349,583	413,329	279,889	358,982	416,688	455,426
Other countries.....	138,485	10,185	33,275	270,490	1,302,110	515,543
Total.....	13,131,119	2,752,388	5,248,539	23,326,840	78,995,407	26,132,285

CORN.

Russia.....	1,939,465	894,021	1,319,339	2,057,372	4,035,339	2,171,393
Roumania.....	6,134,929	2,364,075	2,035,558	2,120,786	5,428,674	6,527,577
United States.....	1,701,943	527,529	231,467	426,669	1,608,563	476,449
Argentina.....	4,735,190	2,666,409	3,664,699	6,958,879	3,608,375	10,675,094
Bulgaria.....	864,684	115,631	137,733	159,723	(c)	(c)
Indo-China.....	918,114	2,956,943	3,689,414	3,247,384	(c)	(c)
Other countries.....	541,619	95,030	123,847	375,278	5,034,385	4,306,482
Total.....	16,835,944	9,619,638	11,202,057	15,346,091	19,715,336	24,156,995

^a Includes maslin and spelt.

^b Bushel: Wheat 60, corn 56 pounds.

^c Included in "Other countries."

ITALY.

Agricultural conditions since seedtime last autumn have been generally propitious. Excepting snowfall and low temperature in February, extending even over southern Italy and Sicily, the winter was seasonable, and autumn-sown cereals in the early spring months presented a promising appearance. Oranges and lemons, which were being gathered when the cold spell occurred, suffered some injury in mountainous districts in Sicily, but elsewhere practically none. The verdelli lemons, however, which ripen in the summer, are reported damaged about 25 per cent; the effect is likely to be seen later in reduced exports. Olive trees were officially reported in March to be in a rather good condition. The seeding of spring cereals and other crops has been effected under favorable circumstances.

The import trade in wheat and corn has of late years increased notably in volume, apparently regardless of variations in the abundance or deficiency of the domestic production. As to wheat the

increase in demand is almost entirely for the soft variety. The import requirements for durum, owing partly to peculiarities of the national dietary, remain relatively stationary. For soft wheat the principal sources of the foreign supply are Russia, Roumania, and Argentina; the bulk of the durum is from Russia. Total takings of both kinds in 1912 were 29,169,320 bushels from Russia, 18,454,670 from Roumania, about 6,300,416 from Argentina, and 11,825,161 from all other sources—an aggregate of 65,759,507 bushels. In this total, however, is included wheat admitted temporarily under customs regulations permitting imports duty free, provided the products manufactured therefrom be exported. The bulk of the admissions under this regulation is hard or durum wheat, to be converted into macaroni, spaghetti, vermicelli, etc., and reexported. Of hard and soft wheat combined the total imports for domestic consumption in 1912 were therefore 58,406,872 bushels, against 43,298,144 bushels in the preceding year. Statistics of imports of wheat and corn, by countries of origin, during the last five calendar years follow:

Imports (special) of wheat and corn into Italy, by countries of origin, calendar years 1907-1912.

[From reports of the Italian Department of Finance.]

WHEAT.

Country of origin.	1907	1908	1909	1910	1911	1912
Hard wheat:						
Roumania.....	<i>Bushels.a</i> 912,227	<i>Bushels.a</i> 555,008	<i>Bushels.a</i> 379,338	<i>Bushels.a</i> 292,697	<i>Bushels.a</i> 118,938	<i>Bushels.a</i> 585,432
Russia.....	12,797,336	12,159,067	19,202,323	22,776,027	18,512,394	17,705,106
Argentina.....	61,361	470,499	313,972	135,693	35,641	.....
Canada.....		633,014	231,410	19,878		
United States.....	5,421,663	5,871,511	3,348,457	1,131,658	168,872	974,837
Other countries.....	99,794	460,210	346,709	53,279	253,933	2,793,669
Total hard wheat.....	19,292,381	20,149,369	23,822,209	24,403,232	19,089,778	22,059,044
Soft wheat:						
Roumania.....	4,388,256	1,764,856	3,011,520	7,330,001	11,986,961	17,869,238
Russia.....	9,134,062	2,266,917	9,261,378	17,288,694	14,453,394	11,464,214
Australia.....		316,213	1,901,137	1,917,782	1,253,058	3,978,531
Argentina.....	36,560	3,008,140	8,494,985	1,370,526	2,377,551	6,300,416
United States.....	897,052	1,439,714	1,865,055	412,260	1,399,958	591,163
Other countries.....	533,146	81,349	599,541	252,133	554,053	3,696,901
Total soft wheat.....	14,989,076	8,877,189	25,133,616	28,571,396	32,024,975	43,700,463
Total hard and soft wheat.....	34,281,457	29,026,498	48,955,825	52,974,628	51,114,753	65,759,507
Hard wheat admitted temporarily.....						
Soft wheat admitted temporarily.....						
5,268,852	3,096,655	4,616,873	5,452,747	5,417,731	5,180,149	
1,621,483	1,715,179	1,315,264	2,261,920	2,396,878	2,172,486	
Total admitted temporarily.....	6,890,335	4,811,834	5,932,137	7,714,667	7,814,609	7,352,635

CORN.

Roumania.....	1,734,469	2,101,181	3,532,557	4,993,025	8,253,904	11,914,564
Russia.....	518,829	223,924	656,223	1,210,247	2,086,339	216,444
Argentina.....	313,289	539,497	3,957,178	8,866,153	4,465,102	8,047,656
United States.....	149,559	39,644	88,696	60,233	53,422	167,313
Turkey, European.....	83,735	52,044	145,858	94,995	32,557	354
Other countries.....	5,236	26,574	79,090	531,427	226,327	942,783
Total.....	2,805,117	2,982,864	8,459,602	15,756,080	15,117,651	21,289,114

a Bushel: Wheat, 60; corn, 56 pounds.

The total exports of macaroni, etc., including the product from both native and foreign wheat, are shown below:

Exports of macaroni, spaghetti, and vermicelli from Italy, by countries of destination, 1907-1912.

[From reports of the Italian Department of Finance.]

Country of destination.	1907	1908	1909	1910	1911	1912
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Austria-Hungary.....	1,287,707	1,498,687	1,627,436	2,005,304	1,968,708	2,222,898
United Kingdom.....	7,401,504	6,184,564	6,435,889	8,232,197	8,543,266	7,053,600
Egypt.....	3,658,754	3,133,839	2,919,772	2,495,607	2,172,633	1,779,994
Argentina.....	426,370	469,359	632,279	745,155	1,200,405	894,627
Canada.....	573,857	81,570	90,830	280,205	232,585	12,775,216
United States.....	98,772,253	84,958,450	90,649,404	111,806,509	110,522,550	92,497,300
Other countries.....	13,051,893	11,584,292	12,898,673	14,508,032	17,293,544	29,180,086
Total.....	125,172,338	107,910,761	115,254,283	140,073,009	141,933,691	146,433,721

PORUGAL.¹

Formerly a Kingdom, but proclaimed a Republic October 5, 1910, Portugal comprises a continental area, i. e., not including the Azores and Madeira, of 22,018,191 acres. Compared with the States of the American Union, it is most nearly coextensive with South Carolina, which has a total surface of 19,823,960 acres. The population is for the greater part rural, and agriculture and forestry occupy the larger proportion of the inhabitants. Out of a total population in 1900 of 5,016,297 persons, 3,388,782 were classed as rural; and in 1902, the latest year for which statistics of the distribution of the land are available, 12,522,442 acres, or 56.87 per cent of the total area, were returned as cultivated, and 9,495,749 acres, or 43.13 per cent, as uncultivated. Much of the uncultivated land is said to be capable of profitable exploitation. Of the cultivated, 7,668,065 acres in 1902 were utilized for agriculture and 4,834,377 for forestry. The distribution of the cultivated land is shown in detail below:

Cultivated areas in Portugal in 1902.

Agriculture.	Acres.	Forestry.	Acres.
Fields and gardens.....	5,776,643	Chestnut trees.....	207,534
Vineyards.....	773,830	Evergreen oaks.....	1,029,591
Olive trees.....	813,344	Cork trees.....	904,392
Almond, carob bean, fig, and other fruit trees.....	324,248	Oaks.....	116,165
Total.....	7,688,065	Other trees.....	2,576,695
		Total.....	4,834,377

Of field crops, Indian corn, grown chiefly in the northern part of the country, where it constitutes the principal food of the masses, is the most extensively cultivated. Wheat, of which both durum and

¹ Compiled chiefly from *Estatistica Agricola*, Lisbon, 1913, published by the Portuguese Department of Finance.

soft varieties are raised, is second in economic importance and rye third. The General Bureau of Statistics of the Portuguese Department of Finance estimated the total area sown to wheat for the 1911 harvest at 1,211,183 acres and the production by measure at 11,684,162 Winchester bushels, by weight at 11,860,643 bushels of 60 pounds. The same authority estimated production in 1910 at 9,120,000 bushels and in 1909 at 6,500,000 bushels. Barley, oats, rice, potatoes, pulse, onions, and other vegetables are also grown, but each on a less extensive scale than rye. Although recent official statistics of cereal production, excepting in the case of wheat, are lacking, the relative importance of Indian corn, wheat, and rye culture is suggested by estimates of the output in 1902, 1903, and 1904, made by the General Bureau of Agriculture.

Production of Indian corn, wheat, and rye in Portugal, 1902-4.

Crop.	1904	1903	1902
Indian corn (milho).....	<i>Bushels.a</i> 15,262,152	<i>Bushels.a</i> 20,163,187	<i>Bushels.a</i> 24,792,412
Wheat (trigo).....	7,953,874	8,035,654	11,978,633
Rye (centeio).....	4,494,698	5,509,653	7,737,733

a Winchester bushels.

Later official estimates of the production of corn and rye are not extant. Unofficial estimates of eminent Portuguese commercial authorities, however, are available on the production of wheat from 1899 to 1908.

Production of wheat in Portugal, 1899-1908.

[Estimates of Conselho do Mercado Central de Produtos Agrícolas e do Conselho do Fomento Comercial de Produtos Agrícolas.]

Year.	Bushels (60 lbs.).	Year.	Bushels (60 lbs.).
1908	6,944,490	1903	8,230,507
1907	7,596,127	1902	8,340,737
1906	9,553,267	1901	9,259,320
1905	7,752,843	1900	6,356,597
1904	8,855,143	1899	5,401,270

The production of wheat and Indian corn does not suffice for domestic needs, and small quantities, varying with the size of the domestic crop, are annually imported.

Fruit is grown in profusion. Olive groves and vineyards cover quite a large proportion of the land devoted to agricultural uses, and oranges, figs, almonds, and other fruit trees flourish. Wine, of which the four principal kinds produced are white, red, port, and Madeira, constitutes in value the country's principle article of export; the surplus "white" wine is shipped almost exclusively to Mozambique,

the "red" to Brazil and Angola, and "port" for the greater part to the United Kingdom. Olive oil is also produced in exportable quantities, the bulk of the surplus being consigned to Brazil. The latest and most comprehensive official statistics relative to the vintage and to the olive-oil industry, though not complete for a few Departments, are given below:

Portugal: Production of wine, 1911 and 1908; olives crushed and production of olive oil in 1911, by specified districts.

Province and department.	Production of wine.		Olives crushed in 1911.	Production of olive oil in 1911.
	1911	1908		
Entre Minho-e-Douro:				
Vianna do Castello.....	Gallons. 4,977,042	Gallons. 11,275,304	Bushels. 91,270	Gallons. 69,192
Braga.....	10,125,134	20,694,549	204,477	140,599
Porto.....	9,752,047	16,148,712	87,448	36,701
Tras-os-Montes:				
Villa Real.....		12,345,457		
Braganza.....	4,028,619	3,021,576		860,221
Beira:				
Aveiro.....	7,653,929	11,427,598	66,551	63,159
Vizeu.....	6,684,346		213,109	235,957
Coimbra.....	8,049,260	8,904,907	255,149	623,857
Guarda.....				267,933
Castello Branco.....		1,798,469		
Estremadura:				
Leiria.....	14,424,739	15,412,999		619,342
Santarem.....		26,070,145		
Lisbon.....	30,285,506	49,286,726	568,713	586,008
Alemtejo:				
Portalegre.....		521,709	561,625	785,976
Evora.....		235,191	1,394,289	700,974
Beja.....	479,231	779,169	1,076,670	1,127,718
Algarve (Faro).		4,337,539	4,136,638	341,808
				517,179

Detailed statistics of the export trade in wine and olive oil, by countries of destination, in the latest years for which statistics have been published follow:

Exports of wine from Portugal, by varieties and countries of destination, 1909 and 1910.

Country of destination.	1909				1910			
	White.	Red.	Madeira.	Port.	White.	Red.	Madeira.	Port.
Germany.....	Gallons. 117,503	Gallons. 56,324	Gallons. 208,945	Gallons. 314,383	Gallons. 187,344	Gallons. 608,085	Gallons. 246,497	Gallons. 664,665
France.....	1,535	10,136	150,947	91,498	141,503	187,606	153,660	127,803
Russia.....	3	201	112,193	75,201	5	1,683	120,488	89,263
United Kingdom.....	16,880	66,399	85,475	3,722,385	27,534	129,734	91,654	4,877,453
United States.....	74	13,676	1,120	34,897	174	13,174	2,045	64,634
Brazil.....	102,960	10,065,120	20,556	1,005,226	134,679	11,826,431	30,004	1,280,450
Angola.....	128,043	1,167,946	3,292	18,888	150,403	1,362,652	674	22,711
Mozambique.....	1,257,838	664,530	2,016	25,321	1,595,941	745,089	824	30,702
Other countries.....	386,998	1,453,315	45,246	907,913	1,029,217	2,569,576	100,619	1,067,492
Total.....	2,011,834	13,497,647	630,090	6,196,712	3,266,800	17,444,030	746,465	8,225,173

Exports of olive oil from Portugal, by countries of destination, 1906-1910.

Country of destination.	1906	1907	1908	1909	1910
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
United Kingdom.....	1,236	2,222	2,013	9,692	21,149
United States.....	4,169	48	79	100,950	92,718
Brazil.....	327,687	492,006	360,825	520,838	539,863
Angola.....	76,158	107,731	70,702	118,538	97,249
Mozambique.....	37,187	41,966	39,908	39,781	37,343
Other countries.....	35,090	62,037	59,917	107,510	160,027
Total.....	501,527	706,010	533,444	897,309	948,349

DENMARK.

Recently published estimates of agricultural production in 1912 indicate a heavy diminution in the production of wheat and an increase in that of barley and oats. About one-sixth of the surface under wheat and a small proportion of that under rye was frozen out in the winter of 1911-12 and subsequently seeded to spring-sown crops, mostly to barley and oats. Owing to the enlargement of old beet-sugar factories and the construction of new, there has been a remarkable development during the last five years in the culture of sugar beets.

Production of crops in Denmark, 1912-1908.

[Estimates of the Danish Bureau of Statistics.]

Crop.	1912	1911	1910	1909	1908
	Bushels. ^a	Bushels.^{a}	Bushels.^{a}	Bushels.^{a}	Bushels.^{a}
Wheat.....	3,604,000	4,466,295	4,547,199	3,829,242	4,317,723
Rye.....	18,473,000	19,286,084	19,564,742	18,922,028	19,170,454
Barley.....	22,872,000	21,016,461	21,793,411	21,598,977	20,166,019
Oats.....	42,395,000	41,187,545	40,595,683	42,170,358	40,437,088
Mashlin.....	17,764,000	17,116,511	17,169,318	17,548,423	16,932,709
Potatoes.....	28,888,000	29,522,396	30,517,267	24,326,960	29,751,374
Carrots.....	12,798,000	10,769,871	12,779,352	15,724,486	12,889,894
Mangolds.....	208,684,000	175,417,041	202,318,031	192,306,157	184,070,838
Kohlrabi.....	165,410,000	126,798,652	161,942,558	153,904,934	151,958,619
Turnips and other roots.....	142,963,000	113,956,134	141,725,662	139,645,119	137,276,379
Beets (sugar).....		Tons. ^b	Tons. ^b	Tons. ^b	Tons. ^b
	1,080,000	805,208	814,026	496,247	477,860

^a Winchester bushels.

^b Tons of 2,000 pounds.

The annual imports of wheat, rye, barley, and corn into Denmark, 1907-1911, are shown in the following statement:

Imports of wheat, rye, barley, and corn into Denmark, by countries of origin, 1907-1911.

WHEAT.

Country of origin.	1907	1908	1909	1910	1911
Germany.....	<i>Bushels.</i> 949,418	<i>Bushels.</i> 1,150,865	<i>Bushels.</i> 990,766	<i>Bushels.</i> 634,168	<i>Bushels.</i> 958,075
Hamburg (free port of).....	610,755	880,025	784,647	473,015	644,500
Russia.....	25,497	31,893	728,473	650,001	362,991
United Kingdom.....	155	29,192	3,836	25,864	15,686
United States.....	1,761,751	1,732,954	1,333,044	849,682	893,510
South America (excepting Brazil).....	336,660	691,043	211,090	81,206	13,205
Other countries.....	71,060	12,821	713	146,000	185,896
Total.....	3,755,296	4,528,793	4,052,569	2,859,936	3,073,863

RYE.

Germany.....	2,278,070	2,920,246	4,119,653	5,264,478	4,860,415
Hamburg (free port of).....	789,423	583,742	347,876	612,769	670,301
Russia.....	1,081,644	728,573	1,338,226	1,260,220	1,205,412
United States.....	42,720	360,245	5,907	(a)	(a)
Other countries.....	63,365	74,653	10,439	62,859	61,701
Total.....	4,255,222	4,667,459	5,822,101	7,200,326	6,797,829

BARLEY.

Germany.....	52,337	77,235	159,494	47,380	103,267
Hamburg (free port of).....	323,054	711,167	1,200,538	641,640	709,091
Sweden.....	8,294	7,225	4,845		40,863
Russia.....	693,752	1,148,992	3,746,035	3,814,527	2,550,929
France.....				115,599	262,458
Roumania.....	33,695	248,977	77,804	281,523	336,284
Other countries.....	45,967	766	191,587	223,234	36,656
Total.....	1,157,099	2,194,362	5,380,303	5,123,903	4,039,548

CORN.

Germany.....	2,992,143	858,058	888,613	530,171	1,349,794
Hamburg (free port of).....	3,597,517	2,273,538	2,512,294	1,735,453	2,885,369
Russia.....	3,627,820	865,082	1,028,916	186,300	586,585
France.....				161,440	241,388
United States.....	5,655,854	3,003,110	2,250,888	2,735,129	3,949,950
Argentina.....	373,674	2,563,035	2,165,665	899,548	396,517
Roumania.....	1,602,643	944,859	364,576	650,916	1,171,485
Bulgaria.....	95,304	51,962	103,179	125,768	398,517
Other countries.....				206,288	124,292
Total.....	17,944,955	10,559,644	9,314,081	7,231,013	11,103,897

a Included in "Other countries."

GERMANY.

The agricultural situation in mid-April was, as a whole, less satisfactory than at the same date last year. The winter up to February, when severe freezes occurred over wide areas unprotected by snow, had been comparatively mild, with much rain. In March fine springlike weather ensued, favorable to the development of autumn-sown crops and to great activity in field work; and by mid-April

spring seeding—especially of barley and oats—was in some localities finished.

The acreage sown to wheat last autumn was smaller than usual, but both wheat and the more important crop, rye, notwithstanding the precarious incidence of the February freeze, are officially stated to have emerged from the winter in a healthy state, and comparatively little plowing up is anticipated. The early-sown fields in particular present a promising appearance, and the lack of strength and vigor in many late-sown fields is looked upon as to a large extent remediable in the event of subsequent forcing weather. Clover came through the winter in a much less satisfactory state than did the cereals, and a considerable proportion of the rapeseed area will have to be turned under and sown to other crops.

The Imperial Statistical Bureau's report on the condition of the winter cereals on April 1, 1913-1909, is quoted below:

Condition of crops in Germany in April.

[1=very good, 2=good, 3=medium, 4=poor, and 5=very poor.]

Crop.	Apr. 1, 1913.	Apr. 1, 1912.	Apr. 15, 1911.	Apr. 15, 1910.	Apr. 15, 1909.
Winter wheat.....	2.7	2.3	2.7	2.2	3.1
Winter spelt.....	2.9	1.9	2.9	2.7	2.3
Winter rye.....	2.7	2.2	2.8	2.4	3.0

The results of a live-stock census taken in Germany December 2, 1912, shows, as compared with the results of previous censuses, except that of 1907, a notable increase in the number of horses, cattle, and swine, but a heavy and constant decrease in sheep. The decline in the number of cattle and swine in 1912 as compared with 1907 is largely due to the heavy deficiency in the forage and potato crops of 1911.

Number of live stock in Germany, Dec. 2, 1912 (preliminary), compared with final returns of previous censuses.

Live stock.	1912	1907	1904	1900	1897	1892	1883
	Number.	Number.	Number.	Number.	Number.	Number.	Number.
Horses.....	4,516,297	4,345,047	4,267,403	4,195,361	4,038,485	3,836,273	3,522,545
Cattle.....	20,158,738	20,630,544	19,331,568	18,939,692	18,490,772	17,555,834	15,786,764
Mules.....	1,746	942	.....	649	.....	383	1,009
Asses.....	11,056	10,349	.....	7,199	.....	6,320	8,786
Sheep.....	5,787,848	7,703,710	7,907,173	9,692,501	10,866,772	13,589,662	19,189,715
Swine.....	21,885,073	22,146,532	18,920,666	16,807,014	14,274,557	12,174,442	9,206,195
Goats.....	3,383,971	3,533,970	3,329,881	3,266,997	.....	3,091,508	2,640,994
Poultry.....	82,474,317	77,103,045	.....	64,453,171	.....	.....	.....
Bees (stands).....	2,619,891	2,594,090	.....	2,605,350	.....	2,034,485	1,911,797

AUSTRIA.

The condition of autumn-sown wheat and rye on April 1, as reported by the Austrian Department of Agriculture, was little better than medium, the general appearance of the plants being quite inferior to that at the corresponding date a year ago. Although there was extensive lack of snow protection during the winter, little plowing up was necessitated thereby, excepting in high altitudes or on wet lands or where the plants were weak. Clover, though it suffered some damage from field mice and, on heavy lands, from freezing, in general wintered very well; its April 1 condition was better than in either of the last two years. The growth of grass in the pastures and meadows of the low regions has been stimulated by the warm spring and, even in higher altitudes, is more advanced than usual at this season. Spring seedings were progressing in many parts of the country under favorable conditions. Potato planting had been completed in southern provinces and in south Tyrol, and sugar-beet planting was in progress in the valleys of Bohemia and Moravia. The Austrian Department of Agriculture's estimates of the April 1 condition of winter cereals and grasses is given below, with comparisons:

Crop conditions in Austria, April, 1913-1910.

[1=very good; 2=good; 3=medium; 4=poor; 5=very poor.]

Crop.	Apr. 1, 1913.	Apr. 1, 1912.	Apr. 15, 1911.	Apr. 15, 1910.
Wheat.....	2.8	2.0	2.6	2.0
Rye.....	2.8	1.8	2.9	2.3
Clover.....	2.7	3.1	3.0	2.1
Meadows.....	2.5	2.1	2.5	2.4
Pastures.....	2.7	2.3	3.1	2.5

HUNGARY.

Fine weather during the first months of spring promoted the active dispatch of farm work; barley and oats sowing was practically finished by April 1. The growing winter cereals, of which the appearance had previously been discouraging, also made good improvement as the vernal season progressed. Sowings last autumn, it may be recalled, were retarded and in many places prevented by veritable deluges of rain. The areas sown to winter wheat and rye in the entire country, according to the March 10 report of the Hungarian Department of Agriculture, were respectively 20 and 10 per cent less than in normal years. The proportion of the prepared land not seeded, however, varied in different parts of the Kingdom; in the famed cereal-producing region west of the Danube and between the Danube and the Thiess, the area unsown was only 8 to 10 per cent less

than that normally sown, but in Transylvania fully half the land prepared for winter wheat was left unseeded. Although, on the whole, from 10 to 15 per cent of the seed was sown late and failed to show above ground before the advent of freezing weather, the germinating power was generally preserved and the plants came up under the snow during the winter or later through the influence of the warm spring. Excepting a severe cold spell during the greater part of February, the winter was unusually mild; of the plants which had shown above ground only from 2 to 3 per cent are reported winter-killed.

The normal area under wheat has in late years been upward of $8\frac{1}{2}$ and that under rye upward of $2\frac{1}{2}$ million acres. The Hungarian Department of Agriculture's final estimates respecting cereals and potatoes in Hungary proper in 1912 and 1911 and the final official figures on cereals in Croatia-Slavonia in the same years are given below; the final estimates for 1912 were published in January, 1913; previous preliminary estimates are given for comparison.

Final estimates of the area and production of specified crops in Hungary proper and Croatia-Slavonia, 1912 and 1911.

HUNGARY PROPER.

Crop.	Area.			Production.		
	1912 (final).	1912 (Oct. 21 estimate).	1911 (final).	1912 (final).	1912 (Oct. 21 estimate).	1911 (final).
Wheat.....	Acres.	Acres.	Acres.	Bushels. ^a	Bushels. ^a	Bushels. ^a
Wheat.....	8,748,421	8,607,558	8,352,650	173,327,519	169,509,658	174,887,567
Rye.....	2,794,833	2,759,037	2,690,809	54,141,909	53,018,780	50,352,891
Barley.....	2,602,928	2,632,591	2,737,067	70,140,433	70,172,965	73,595,275
Oats.....	2,472,834	2,486,964	2,653,321	76,768,147	77,520,605	89,656,094
Corn.....	6,022,526	6,123,770	6,089,950	181,825,747	184,045,397	137,420,800
Potatoes.....	1,530,314	1,534,401	1,534,155	199,017,311	185,369,830	163,037,915

CROATIA-SLAVONIA.

Crop.	Area.		Production.		
	1912	1911	1912 (final).	1912 (pre- liminary).	1911 (final).
Wheat.....	Acres.	Acres.	Bushels. ^a	Bushels. ^a	Bushels. ^a
Wheat.....	834,357	811,050	11,314,169	14,855,330	15,880,594
Rye.....	164,724	175,735	2,530,802	2,524,047	2,673,857
Barley.....	156,622	158,415	1,978,183	2,815,761	3,145,932
Oats.....	239,337	247,545	3,311,192	6,223,682	6,441,683
Corn.....	1,057,294	1,023,773	24,165,829	.....	24,004,795

^a Bushels: Wheat and potatoes 60, rye and corn 56, barley 48, and oats 32 pounds.

The number of live stock in Hungary (including Croatia-Slavonia) in each census year from 1870 to 1911 is shown in the following statement:

Number of live stock in Hungary (including Croatia-Slavonia), Mar. 1 of specified census years.

Live stock.	1911 ^a	1895	1880	1870
Horses.....	Number.	Number.	Number.	Number.
Cattle.....	2,351,481	2,308,457	2,078,528	2,158,819
Sheep.....	7,319,121	6,738,365	5,311,378	5,279,193
Swine.....	8,548,204	8,122,681	9,838,133	15,076,997
Goats.....	7,580,446	7,330,343	4,160,127	4,443,279
	426,981	308,810	333,233	572,951

^a On Mar. 2.

SERVIA, BULGARIA, AND EUROPEAN TURKEY.

Reports from commercial sources state that in Servia not one-half and in Bulgaria only about two-thirds of the usual winter-wheat acreage was seeded last autumn. The reports from European Turkey are conflicting; some state that only a small portion of the arable land has been cultivated; others that the area under autumn-sown cereals is only about 25 per cent less than last year. In all three States the deficiencies in seeding are ascribed to shortage in the labor supply. As spring wheat is usually grown only on a small scale and laborers are still deficient, little addition to the acreage is expected. Definite official information, however, respecting the present state of agriculture is lacking.

RÓUMANIA.

As a result of an excessively wet seedtime last autumn, the acreage of winter wheat is the smallest in many years. According to official returns, the extent sown for the 1913 harvest was not quite 3,570,000 acres; in 1912 the area harvested was 5,113,000 acres, and the annual average of the four preceding years was 4,552,000 acres. As spring wheat is not a popular crop in this country, there is little likelihood of any material increase in the wheat area through spring seedings; the unseeded land is expected to be sown mostly to corn, barley, oats, and other spring-sown crops. On the deficient acreage the wheat plant is believed to have wintered in general in good condition, notwithstanding lack of snow protection in places during spells of rigorous cold. A genial spring has nurtured the early stages of development, and in mid-April the aspect of the fields, excepting the reduced acreage, was about normal. Reports respecting the progress of spring seedings are generally optimistic.

Last year's crop of corn, or maize, which, it may be noted, covered a slightly wider surface (5,136,000 acres) than did wheat, yielded more abundantly than preliminary forecasts indicated. Final official figures, made public in March, put the yield at 104,612,000 measured bushels, compared with 110,712,000 in the preceding year, 103,665,000 in 1910, and 70,138,000 in 1909.

GREECE.

The newly organized Bureau of Statistics, but a few months in existence, has recently issued estimates respecting the general agricultural resources of the country. The year or period to which the figures relate is not stated, but the statement is of value as representing the latest official pronouncement respecting Greek agriculture. Zante currants—small red grapes—of which the decreasing production is put at 192,700 tons, are, dried, the country's leading article of export, 137,722 tons having been shipped abroad in 1911 and 124,080 tons in 1910. Cereal cultivation is limited largely to wheat, barley, oats, and Indian corn. Wheat, though domestic production is insufficient for home needs, is in point of money value the country's most important crop, the outturn being reported as 12,860,000 bushels of 60 pounds each. The combined yield of barley and oats is 220,460,000 pounds and the output of corn 1,378,000 bushels of 56 pounds. The culture of olives and the production of oil is on the increase, the present estimated yield of oil being 112,880,000 pounds. Cotton is grown on a small scale, the estimated production of unginned being 4,410,000 pounds. Tobacco culture results in a product of 8,818,000 pounds. The fig crop is returned at 24,250,000 pounds. Considerable progress is being made in agriculture, notably in the extension of cultivated areas, in the use of improved farm machinery and of artificial fertilizers.

THE RUSSIAN EMPIRE.

The final estimates of the Central Statistical Committee, Department of the Interior, respecting the area and production of numerous crops in 1911 and previous years in the 92 Governments, Provinces, and Territories of European and Asiatic Russia, have recently been published in the Russian Department of Agriculture's Yearbook—French title, "Recueil de données statistiques et économiques sur l'industrie agricole en Russie et dans les pays étrangers." As the widely quoted preliminary estimates of the above-named committee, made soon after the close of each agricultural year, relate to only 73 Governments and embrace a limited number of crops, the final data are of especial interest in that they present a more comprehensive view of the magnitude and diversity of Russian agriculture. The 19 Governments, etc., included in the final but not in the preliminary reports are all Asiatic and much more important as producers of wheat than of rye, their output of the two grains in 1911 having been, respectively, $45\frac{1}{2}$ million and $6\frac{1}{2}$ million bushels; the respective barley and oats yields of these Governments in the same year were $22\frac{1}{2}$ million and 17 million bushels.

The combined area of wheat, rye, barley, and oats in the entire Russian Empire in 1911 was 233 million acres, against 97 million under the same crops in the United States. Adding Indian corn, the premier crop of the Republic, but comparatively unimportant in the Empire, the total surface under the 5 cereals in Russia was 228 million, in the United States 203 million acres.

In the extension of wheat cultivation the Empire has of late years made more advance than any other country; rye culture has meanwhile had comparatively small expansion. In the triennium 1909-1911 an addition of almost 8½ million acres was made to the land under wheat, while that under rye was augmented by less than 1½ million. The coarser grain, which previously had occupied a wider extent of soil than any other cereal, is now secondary in importance, the 80 million acres sown to wheat in 1911 exceeding the area sown to rye by over 6 million acres. Although in 1911 wheat was sown on about 30 million acres more than in the United States, the combined acreage of wheat and rye, the two cereals most extensively grown in the Empire, was slightly less than the combined acreage of wheat and corn, the two leading cereals of the United States, the figures being, respectively, 153 million and 155 million acres. In the extent of land devoted annually to barley and oats Russia, as is well known, holds first rank among all nations. The culture of Indian corn is for the most part localized in the southern part of European Russia, Northern Caucasia, and Transcaucasia; the total annual acreage approximates 5 million acres.

Of other crops of the Empire, statistics respecting which appear in the subsequent statement, several are limited by climatic and other causes to specific localities—cotton and rice, for instance, to political divisions of Central Asia and Transcaucasia. Sugar-beet and hop culture is restricted to a few governments of southern European Russia, and the production of sunflower seed, for the greater part, to Northern Caucasia. The last-named industry is virtually peculiar to Russia, the seed being grown on an important industrial scale in no other country. The crop is utilized primarily for the production of an edible oil, the low grades being used in the manufacture of soap. The seed is crushed entirely in Russian mills and the oil used for domestic consumption. The oilcake, or residue after the expression of the oil by hydraulic pressure, constitutes, as does the like residue from most oleaginous seeds, a valuable cattle food, rich in protein; a heavy proportion is exported, chiefly to Denmark, Germany, and Sweden, with small consignments to a few other countries. In 1911 the total exports of sunflower-seed oilcake from the Russian Empire were 271,379 short tons, of which 153,420 went to Denmark, 81,832 to Germany, 16,345 to Sweden, and 19,728 to other countries. The largest previous exports were 306,590 tons in 1911. Sunflower

seeds roasted are also used to some extent as a human food, in the manner in which peanuts are used in the United States. In 1911, the only year for which complete estimates of this crop are obtainable, the area under sunflowers was almost 2 million acres. The production of seed in 1911 was 635,199 tons, or larger in units of weight than the output of either flaxseed or hempseed, the two other great oilseed crops of Russia.

Area and production of specified crops in the Russian Empire (92 Governments, Provinces, and Territories), 1911-1909.

[Final estimates of the Central Statistical Committee, Department of the Interior.]

Crop.	Area.			Production.		
	1911	1910	1909	1911	1910	1909
Wheat:						
Winter.....	19,737,450	19,095,575	18,235,823	214,840,103	279,716,206	237,907,274
Spring.....	60,348,751	58,462,606	53,447,446	348,644,768	556,525,513	608,258,183
Total.....	80,086,201	77,558,181	71,683,269	563,484,871	836,241,719	846,165,457
Rye:						
Winter.....	72,040,504	69,733,691	70,637,848	752,229,495	854,814,352	885,518,551
Spring.....	1,953,295	1,982,190	2,010,631	16,420,232	20,320,286	18,102,960
Total.....	73,993,799	71,715,881	72,648,479	768,649,727	875,134,638	903,621,511
Barley.....	30,910,323	30,474,089	28,801,706	436,569,370	487,919,439	501,868,911
Oats.....	48,338,452	48,106,683	46,933,161	876,012,679	1,064,515,739	1,163,075,809
Corn.....	4,909,529	5,164,942	5,229,308	95,192,502	102,000,152	55,207,379
Millet.....	8,611,438	9,186,461	9,808,099	72,334,067	107,599,055	112,642,465
Spelt.....	871,169	905,517	903,595	3,702,916	13,655,875	19,378,128
Buckwheat.....	5,307,613	5,485,888	5,579,076	50,901,142	57,856,844	53,669,790
Peas.....	2,557,307	2,583,305	2,405,179	26,439,445	28,861,952	31,339,591
Lentils, beans, and haricots.....	1,242,480	1,288,591	1,259,054	10,489,143	13,364,685	16,781,618
Flaxseed.....	3,830,942	3,564,849	3,600,979	22,401,802	20,179,188	23,197,508
Potatoes.....	11,397,237	11,250,396	10,900,147	1,176,054,621	1,343,268,441	1,204,529,504
Flax (fiber).....	b 2,770,913	b 2,614,956	b 2,651,383	Tons (2,000 pounds).	Tons (2,000 pounds).	Tons (2,000 pounds).
Hemp:				392,568	351,239	404,635
Seed.....	1,715,227	1,806,051	1,834,759	402,835	484,693	391,725
Fiber.....	c 1,702,536	c 1,784,091	c 1,834,759	295,271	325,952	341,840
Sunflower seed.....	1,960,779	d 834,607	d 1,433,303	635,199	d 296,866	d 337,044
Sugar beets.....	1,955,382	1,669,451	1,391,172	14,940,490	14,572,941	7,653,008
Grapes.....	666,083	441,147	750,004	628,919	508,504	411,325
Meadows.....	95,755,357	94,143,963	93,239,436	c 49,096,177	c 50,952,922	c 56,413,441
Tobacco.....	200,339	180,475	159,965	Pounds.	Pounds.	Pounds.
Hops ^d	10,467	8,817	11,007	278,679,769	195,004,786	207,454,458
Rice.....	681,731	513,758	569,067	f 620,067,610	f 562,731,317	f 602,856,249
Cotton (unginned) ^e	1,058,930	1,186,484	841,245	748,665,291	990,252,700	598,634,663
Wine.....				Gallons.	Gallons.	Gallons.
				61,034,739	52,367,382	67,553,208

^a Bushels: Wheat, peas, lentils, beans, haricots, and potatoes, 60; rye, corn, millet, and flaxseed, 56; barley and buckwheat, 48; spelt, 40; and oats, 32 pounds.

^b 27 principal producing governments; area also included in flaxseed area.

^c 72 governments; area also included in hempseed area.

^d Incomplete returns.

^e Tons of hay.

^f Rough rice.

^g Bokhara and Khiva not included.

Obviously in a country of such extensive agricultural interests domestic animals exist in great numbers. Horses and swine are more numerous in the Empire than in any other country. The cattle are exceeded in number only by those in the United States and the sheep only by those in Australia. The official estimates respecting the number of horses, cattle, sheep, goats, and swine in 91 governments (figures for the district of Sukhum, Central Asia, not being extant) are shown, by grand political divisions, for specified years, in the following statement:

Number of live stock in the Russian Empire (91 Governments, Provinces, and Territories), 1908-1910.

[Estimate of Russian Veterinary Office.]

Live stock and year.	European Russia proper (50 governments, etc.).	Poland (10 governments, etc.).	Caucasia (13 governments, etc.).	Central Asia (9 governments, etc.).	Siberia (9 governments, etc.).	Total Russian Empire (91 governments, etc.). ^a
Horses:						
1908.....	20,598,229	1,212,674	1,895,551	4,602,177	4,328,101	32,636,732
1909.....	21,321,309	1,205,737	1,933,658	4,769,374	4,487,036	33,720,114
1910.....	21,868,204	1,221,769	2,006,602	5,118,620	4,697,201	34,912,396
Cattle:						
1908.....	29,686,564	2,452,814	6,464,628	4,998,804	5,369,888	48,972,678
1909.....	30,491,768	2,390,723	6,490,344	5,114,621	5,753,553	50,241,009
1910.....	31,314,609	2,301,106	6,183,706	5,633,555	5,970,814	51,403,790
Sheep:						
1908.....	39,916,182	1,291,895	11,413,513	23,159,442	5,986,644	81,767,676
1909.....	39,931,355	1,172,052	12,710,020	21,438,280	6,063,690	81,315,397
1910.....	40,733,806	1,050,274	13,238,507	20,008,097	5,469,803	80,500,487
Goats:						
1908.....	748,892	6,438	911,703	2,535,675	404,667	4,607,375
1909.....	781,756	8,367	1,013,499	3,023,717	381,174	5,208,513
1910.....	856,616	9,288	1,079,109	2,740,537	342,270	5,027,820
Swine:						
1908.....	11,389,276	747,278	1,079,304 ¹	102,304	1,123,317	14,441,479
1909.....	11,330,171	630,591	1,107,688	125,439	1,265,381	14,459,270
1910.....	12,048,588	612,057	1,184,354	155,639	1,368,680	15,369,318

^a Not including Sukhum, Transcaucasia.

The bulk of the cereal export trade of the Empire consists of wheat, barley, and oats, while rye, the principal bread grain of the Russian people, and corn are exported in much smaller proportions. As a general rule the shipments of wheat are consigned in largest quantities to the United Kingdom, Netherlands, Italy, Germany, and France. More than half the annual exports of barley go to Germany; and Netherlands, the United Kingdom, Roumania, and Germany are normally the chief countries of destination for the exports of corn. Practically all grain exported goes to countries of Europe.

Exports of cereals by varieties from the Russian Empire, by countries of destination, 1907-1912.

WHEAT.

Country of destination.	1907	1908	1909	1910	1911	1912 a
	<i>Bushels.b</i>	<i>Bushels.b</i>	<i>Bushels.b</i>	<i>Bushels.b</i>	<i>Bushels.b</i>	<i>Bushels.b</i>
United Kingdom.....	15,974,497	7,679,387	34,559,712	50,246,236	28,977,845	16,061,770
France.....	14,964,542	11,261,777	17,368,175	22,949,551	17,803,020	16,237,519
Italy.....	15,086,724	12,130,290	31,093,343	39,357,105	26,770,124	22,066,124
Spain.....	1,101,440	2,183,621	2,088,433	3,814,830	2,371,164	(e)
Sweden.....	278,069	23,473	2,444,985	1,386,296	1,527,455	(e)
Belgium.....	1,515,534	309,366	9,747,109	10,182,813	5,106,919	976,249
Netherlands.....	20,630,641	9,042,043	43,061,990	49,481,757	31,526,217	19,810,278
Germany.....	4,409,354	2,418,354	20,277,734	19,935,123	12,928,422	4,703,692
Austria-Hungary.....	26,483	18,658	7,299,162	3,163,413	952,323	160,100
Roumania.....	1,086,393	303,949	1,395,258	1,641,350	1,757,555	(e)
Other countries.....	10,196,449	8,679,712	19,636,558	23,300,020	15,057,986	11,405,025
Total.....	85,270,747	54,050,630	189,272,459	225,458,494	144,779,030	91,420,757

WHEAT FLOUR.

	<i>Barrels.d</i>	<i>Barrels.d</i>	<i>Barrels.d</i>	<i>Barrels.d</i>	<i>Barrels.d</i>	<i>Barrels.d</i>
Finland.....	316,171	351,731	515,892	481,851	381,569	.....
Turkey.....	170,062	74,989	362,263	531,637	530,178	.....
Egypt.....	121,948	95,660	104,953	106,000	82,408	.....
China.....	21,987	18,258	27,445	48,231	96,204	.....
Persia.....	99,098	40,545	34,233	67,965	249,248	.....
Other countries.....	15,653	16,152	17,254	20,844	15,024	.....
Total.....	744,919	597,335	1,062,040	1,256,528	1,354,631	€ 677,115

RYE.

	<i>Bushels.b</i>	<i>Bushels.b</i>	<i>Bushels.b</i>	<i>Bushels.b</i>	<i>Bushels.b</i>	<i>Bushels.b</i>
United Kingdom.....	3,841,468	2,920,274	2,124,530	2,206,339	1,830,791	2,313,154
Norway.....	1,771,872	938,856	2,166,176	1,337,532	2,326,750	(e)
Netherlands.....	10,089,071	5,680,742	9,374,139	11,643,551	11,625,219	8,155,689
Denmark.....	743,448	372,208	1,178,665	775,201	667,261	717,097
Germany.....	8,913,807	4,472,968	4,133,211	6,074,876	11,557,544	4,323,863
Roumania.....	1,363,240	530,213	386,962	1,489,850	2,476,006	(e)
Finland.....	1,215,408	718,178	1,512,597	851,328	1,158,338	(e)
Other countries.....	1,186,666	380,876	2,016,197	1,763,333	3,099,991	4,220,038
Total.....	29,124,980	16,064,315	22,892,477	26,142,010	34,741,900	19,729,841

BARLEY.

	<i>Bushels.b</i>	<i>Bushels.b</i>	<i>Bushels.b</i>	<i>Bushels.b</i>	<i>Bushels.b</i>	<i>Bushels.b</i>
United Kingdom.....	15,598,570	19,309,447	22,106,054	17,875,938	14,683,584	10,859,420
France.....	543,744	457,039	1,007,912	1,282,393	643,936	3,323,130
Norway.....	2,339,256	2,376,795	3,295,313	3,004,571	3,245,141	(e)
Belgium.....	2,126,116	3,621,197	4,268,455	2,942,099	2,173,243	1,604,763
Netherlands.....	18,183,104	21,314,496	31,569,959	33,587,931	34,292,878	21,514,953
Denmark.....	280,250	639,047	2,718,654	2,401,944	1,593,244	(e)
Germany.....	52,368,326	61,399,871	88,280,202	106,447,263	124,241,414	70,589,991
Austria-Hungary.....	346,215	283,615	413,110	387,399	1,608,728	1,551,346
Roumania.....	2,073,681	1,297,599	2,754,394	4,426,529	7,180,847	(e)
Other countries.....	5,950,913	10,672,168	8,502,952	11,745,238	7,932,527	8,755,096
Total.....	99,810,175	121,421,274	164,916,999	184,101,305	197,595,542	118,198,699

a Preliminary, over European frontier only.

b Bushels: Wheat 60, barley 48, corn and rye 56, and oats 32 pounds.

c Included in "Other countries."

d Barrels of 196 pounds.

e Detailed data not available.

Exports of cereals by varieties from the Russian Empire, by countries of destination, 1907-1912—Continued.

OATS.

Country of destination.	1907	1908	1909	1910	1911	1912
United Kingdom.....	14,086,207	15,706,221	27,187,245	27,187,445	26,188,488	10,821,426
France.....	1,919,689	1,809,116	8,363,048	12,269,086	12,418,264	6,183,188
Italy.....	1,380,861	681,371	2,405,863	676,229	143,294	1,118,368
Sweden.....	329,189	246,874	1,187,082	2,251,921	2,448,019	16,928
Belgium.....	605,225	606,861	5,302,826	7,266,346	6,440,991	4,342,564
Netherlands.....	7,576,944	10,171,316	21,308,921	28,275,426	27,159,364	22,740,907
Germany.....	2,398,549	2,142,653	15,499,807	14,347,618	18,245,742	9,723,371
Finland.....	901,787	1,044,441	1,243,528	1,302,299	1,695,183	(a)
Other countries.....	297,356	739,988	1,760,221	1,159,714	1,331,926	3,437,489
Total.....	29,495,807	33,148,841	84,258,541	94,736,084	96,071,271	58,384,241

CORN.

United Kingdom.....	11,368,462	5,834,708	4,634,706	2,713,657	13,268,046	3,875,032
France.....	1,528,972	822,586	1,332,451	1,637,661	3,596,898	1,302,640
Italy.....	159,025	219,714	297,247	361,460	953,173	59,973
Belgium.....	1,731,702	979,750	1,089,135	334,584	1,080,655	862,193
Netherlands.....	10,037,691	4,816,841	6,296,427	3,607,346	11,503,185	(a)
Germany.....	5,887,607	2,768,540	3,361,865	1,814,417	6,669,443	4,748,188
Austria-Hungary	2,029,605	1,544,853	1,900,497	1,167,050	3,151,443	5,901,218
Roumania.....	3,953,577	4,988,400	4,952,043	3,368,293	9,653,226	(a)
Turkey.....	685,007	1,442,762	2,247,224	2,314,220	1,329,261	(a)
Other countries.....	1,254,573	126,891	424,163	366,882	1,554,142	12,874,860
Total.....	38,636,221	23,545,045	26,535,758	17,685,570	52,759,472	29,624,104

^a Included in "Other countries."

JAPAN.

The Twenty-eighth Statistical Report of the Department of Agriculture and Commerce, published in March, 1913, states the 1912 production of barley to have been 90,559,313 measured bushels from an area of 3,132,384 acres, and that of wheat 26,513,860 bushels from 1,216,361 acres. Statistics relative to like features of other Japanese products are given in the volume in great detail; excepting barley and wheat, however, they relate to 1911 and earlier years and are the latest extant. A résumé of the figures follows:

Final estimates of specified crops of Japan, 1911-1909.

[From reports of the Department of Agriculture and Commerce, Japan.]

Crop.	Area.			Production.		
	1911	1910	1909	1911	1910	1909
	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Bushels.a</i>	<i>Bushels.a</i>	<i>Bushels.a</i>
Rice.....	7,286,110	7,228,193	7,200,338	264,626,106	238,716,252	268,428,392
Barley.....	3,102,125	3,176,588	3,236,181	86,468,049	81,952,574	87,185,108
Wheat.....	1,223,399	1,165,205	1,106,180	25,645,371	23,556,389	22,965,615
Soya beans.....	1,199,265	1,171,773	1,137,176	18,905,455	17,387,789	19,283,078
Beans, small red.....	345,782	345,733	331,425	4,892,218	4,943,910	4,621,438
Millet, foxtail.....	454,232	464,344	476,370	10,174,362	10,712,526	11,403,028
Millet, barnyard.....	140,070	150,061	143,922	4,070,910	3,968,837	4,176,715
Millet, proso.....	80,135	82,375	77,305	2,032,054	2,164,620	1,999,527
Buckwheat.....	370,122	383,760	385,306	6,226,864	6,713,952	6,522,440
Corn.....	131,850	130,625	120,320	3,550,308	3,703,233	3,100,461
Peas.....	75,827	70,891	69,012	1,564,034	1,475,890	1,394,876
Beans.....	107,066	106,559	104,194	2,490,962	2,352,959	2,418,871
Peanuts.....	19,142	17,405	16,170	1,568,323	1,286,927	1,355,660
Rape seed.....	339,331	339,290	343,507	5,377,387	5,364,973	5,385,695

^a Winchester bushels.

Final estimates of specified crops of Japan, 1911-1909—Continued.

Crop.	Area.			Production.		
	1911	1910	1909	1911	1910	1909
Potatoes, sweet.....	720,121	718,562	722,927	4,158,052	3,442,826	3,751,234
Potatoes, white.....	168,902	167,589	151,953	755,052	741,567	659,886
Radishes.....	257,865	256,544	242,379	2,827,865	2,717,832	2,716,688
Carrots.....	20,792	23,071	20,860	128,562	118,986	116,009
Burdock.....	31,960	31,790	30,423	185,212	180,974	176,412
Ginger, green.....	6,997	6,509	5,857	33,255	27,344	30,837
Chilli.....	2,750	2,218	1,907	2,872	2,111	2,247
Lillies, food, green.....	1,691	1,657	1,718	2,917	2,983	3,071
Taro.....	149,537	141,459	140,035	677,741	620,147	576,214
Turnips.....	24,277	23,397	21,025	187,846	176,147	165,030
Cabbage.....	6,325	5,632	4,943	51,753	47,314	36,392
Leeks.....	26,830	25,291	21,973	137,403	114,061	116,862
Onions.....	3,417	3,032	2,336	23,210	20,514	15,045
Lotus.....	4,722	4,700	4,289	21,884	21,700	19,370
Arrowroot.....	848	936	686	1,962	1,289	1,285
Cucumbers.....	26,737	23,703	21,358	195,093	191,518	166,658
Squash.....	40,449	33,136	31,180	269,426	234,576	201,684
Water melons.....	14,523	12,212	10,842	86,556	82,032	67,856
Egg plant.....	53,303	54,506	47,776	351,282	332,913	311,766
Tomatoes.....	218	132	96	1,359	792	566
Cotton, unginned.....	6,862	8,332	9,818	3,022	2,982	4,037
Hemp.....	28,636	30,185	31,166	10,550	10,046	10,281
Indigo leaf.....	12,405	21,750	22,439	10,192	17,898	16,600
Tobacco.....	68,022	72,845	71,989	37,448	46,893	45,925
Sugar cane.....	52,153	49,166	52,362	947,348	908,870	364,526
Peppermint.....	10,237	7,377	4,404	16,753	13,772	5,396
Flax (fiber).....	9,972	7,651	12,486	12,425	9,464	14,850
Mulberry trees.....	1,104,163	1,084,540	1,061,072	.....	.....	.....
Tea.....	123,057	118,531	120,628	35,032	33,696	32,385
Plums.....	4,643,392	4,694,754	4,744,633	a 2,420,642	a 2,446,718	a 2,404,742
Peaches.....	6,457,232	6,129,178	5,762,547	38,915	37,903	40,709
Cherries.....	106,753	84,311	65,628	983	738	517
Pears.....	7,452,739	6,470,737	5,897,347	77,778	81,116	71,459
Persimmons.....	9,566,102	9,450,905	9,363,796	179,293	194,522	181,781
Apples.....	2,574,055	2,615,856	2,279,362	44,601	52,676	26,077
Quinces.....	93,696	73,337	65,859	802	749	667
Figs.....	242,629	238,445	187,900	2,975	2,290	2,747
Oranges.....	20,145,028	18,866,291	18,194,103	239,095	232,124	187,259

a Plums in Winchester bushels, other fruit in tons.

Owing to the fact that the culture of the fields is largely by hand labor and that the national diet is to a large extent vegetarian, the raising of live stock is on a rather limited scale. The subjoined statement shows the number of cattle, horses, sheep, swine, etc., each year, 1906-1911, as estimated by the Japanese Department of Agriculture and Commerce:

Live stock and poultry in Japan Dec. 31, 1911-1906.

Live stock.	1911	1910	1909	1908	1907	1906
Cattle.....	Number.	Number.	Number.	Number.	Number.	Number.
Horses.....	1,405,026	1,384,183	1,350,404	1,297,974	1,237,161	1,190,373
Sheep.....	1,576,146	1,564,643	1,551,156	1,494,506	1,495,252	1,465,466
Goats.....	3,736	3,357	3,411	4,085	3,949	3,501
Swine.....	100,081	91,730	87,338	83,352	80,901	74,750
Fowls.....	298,709	279,101	287,107	284,729	317,640	284,708
Ducks.....	20,255,043	20,648,608	20,412,257	19,349,835	19,247,906	18,647,723

The foregoing figures respecting crops and live stock do not include Formosa. Agricultural areas and production of that island, 1909-1911, as officially returned are given below:

Area and production of specified crops in Formosa (Taiwan), 1911-1909.

Crop.	Area.			Production.		
	1911	1910	1909	1911	1910	1909
Rice.....	<i>Acres.</i> 1,208,058	<i>Acres.</i> 1,152,873	<i>Acres.</i> 1,212,626	<i>Bushels.^a</i> 22,978,418	<i>Bushels.^a</i> 21,435,674	<i>Bushels.^a</i> 23,700,709
Barley.....	3,350	3,301	3,414	46,173	44,259	34,287
Wheat.....	13,371	14,270	14,513	137,763	138,198	156,314
Pulse.....	83,042	65,478	62,836	603,561	664,615	625,926
Peanuts.....	45,857	48,426	54,138	880,304	977,514	1,920,756
Sesamum.....	30,732	23,228	28,573	193,206	155,244	187,222
Sweet potatoes.....	265,156	258,238	268,614	747,305	708,064	866,675
Sugar cane.....	220,774	155,477	95,661	3,118,670	2,382,030	1,467,958
Jute.....	5,323	5,176	5,058	2,316	2,377	2,929
Tea.....	81,812	82,299	82,451	130,336,960	132,546,391	125,393,001
Indigo.....	6,521	6,683	6,862	27,993,497	35,203,473	34,568,357
Tobacco.....	1,005	1,559	929	1,093,190	1,726,187	832,410
Camphor.....	6,828	5,747	6,757	5,965,050	7,091,057	4,679,685
Camphor oil.....				7,018,835	7,749,154	5,119,572

^a Winchester bushels.

Approved:

D. F. HOUSTON,

Secretary of Agriculture.

WASHINGTON, D. C., May 1, 1913.

[Cir. 47]



